

<b>H-ZK50</b>	<b>607567</b>	$n_d = 1.60738$	$v_d = 56.65$	$n_F - n_C = 0.010721$
		$n_e = 1.60994$	$v_e = 56.38$	$n_{F'} - n_{C'} = 0.010819$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.57933
$n_{1970}$	1970.09	1.58405
$n_{1530}$	1529.58	1.58926
$n_{1129}$	1128.64	1.59403
$n_{1064}$	1064.00	1.59491
$n_t$	1013.98	1.59564
$n_s$	852.11	1.59850
$n_{A'}$	768.19	1.60048
$n_r$	706.52	1.60230
$n_C$	656.27	1.60414
$n_{C'}$	643.85	1.60465
$n_{He-Ne}$	632.80	1.60513
$n_D$	589.29	1.60729
$n_d$	587.56	1.60738
$n_e$	546.07	1.60994
$n_F$	486.13	1.61486
$n_{F'}$	479.99	1.61547
$n_g$	435.84	1.62073
$n_h$	404.66	1.62562
$n_i$	365.01	1.63393

Constants of Dispersion Formula	
$A_0$	2.54047355E+00
$A_1$	-9.05535161E-03
$A_2$	1.49621725E-02
$A_3$	3.92388778E-04
$A_4$	-1.51543800E-05
$A_5$	7.76341926E-07

Density	Solarization
$\rho$ (g/cm <sup>3</sup> )	$\Delta\lambda$ (%)
3.47	-10.0

Relative Partial Dispersion	
$P_{d,C}$	0.3022
$P_{e,d}$	0.2388
$P_{g,F}$	0.5475
$P'_{d,c'}$	0.2523
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4862

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	-0.0020
$\Delta P_{C,t}$	-0.0218
$\Delta P_{C,s}$	-0.0103

Thermal Properties	
T <sub>g</sub> (°C)	594
T <sub>s</sub> (°C)	637
T <sub>10</sub> <sup>14.5</sup> (°C)	532
T <sub>10</sub> <sup>13</sup> (°C)	570
$\alpha_{50/80^\circ C}$ (10 <sup>-7</sup> /K)	80
$\alpha_{100/300^\circ C}$ (10 <sup>-7</sup> /K)	95
$\lambda$ (W/(m·K))	0.87

Mechanical Properties	
HK (10 <sup>7</sup> Pa)	489
F <sub>A</sub>	210
E (GPa)	83.7
G (GPa)	31.5
$\mu$	0.328
$\sigma_b$ (MPa)	83.9
B (10 <sup>-12</sup> /Pa)	1.77

Chemical Properties (grade)	
RC (S)	1
RA (S)	3
D <sub>W</sub>	1
D <sub>A</sub>	3
R <sub>OH</sub> (S)	2
RP (S)	2

Expansion Coefficient $\alpha$ (×10 <sup>-7</sup> /K)	
°C	$\alpha$
-50/-40	72
-40/-30	75
-30/-20	77
-20/-10	78
-10/0	79
0/10	80
10/20	80
20/30	81
30/40	82
40/50	82
50/60	83
60/70	84
70/80	85
80/90	86
90/100	89
100/110	90
110/120	91
120/130	92
130/140	94
140/150	96
150/160	97

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.917	0.841
2200	0.952	0.904
2000	0.983	0.966
1800	0.993	0.986
1600	0.999	0.998
1400	0.999	0.998
1200	0.999	0.998
1060	0.999	0.998
1000	0.999	0.998
950	0.999	0.998
900	0.999	0.998
850	0.999	0.998
800	0.999	0.998
750	0.999	0.998
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.999	0.998
480	0.999	0.998
460	0.999	0.998
440	0.999	0.998
420	0.997	0.995
400	0.995	0.991
390	0.992	0.986
380	0.990	0.981
370	0.983	0.968
360	0.971	0.944
350	0.948	0.898
340	0.903	0.813
330	0.824	0.673
320	0.698	0.482
310	0.515	0.262
300	0.312	0.095
290	0.145	0.021
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	350/295
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	335/292

Range of Temperature (°C)	Temperature Coefficients of Refractive Index									
	dn/dt relative (×10 <sup>-6</sup> / °C)									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	0.9	1.1	1.2	1.2	1.3	1.3	1.5	1.8	1.8	2.2
-40 ~ -20	0.9	1.1	1.2	1.2	1.3	1.3	1.6	1.8	1.9	2.3
-20 ~ 0	0.9	1.0	1.2	1.2	1.2	1.3	1.6	1.8	1.9	2.3
0 ~ 20	0.8	1.0	1.1	1.2	1.2	1.2	1.6	1.8	1.9	2.3
20 ~ 40	0.8	1.1	1.2	1.3	1.3	1.3	1.7	1.9	1.9	2.3
40 ~ 60	0.9	1.1	1.3	1.3	1.3	1.3	1.7	1.9	1.9	2.4
60 ~ 80	0.9	1.2	1.4	1.4	1.5	1.5	1.9	2.0	2.1	2.5
80 ~ 100	1.0	1.3	1.5	1.5	1.5	1.5	2.0	2.1	2.1	2.7
100 ~ 120	1.1	1.4	1.6	1.6	1.6	1.6	2.1	2.3	2.4	2.8
120 ~ 140	1.3	1.4	1.7	1.7	1.7	1.8	2.3	2.4	2.5	3.0
140 ~ 160	1.3	1.5	1.8	1.8	1.9	1.9	2.3	2.6	2.7	3.1

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
-1.74E-06	1.22E-08	-1.24E-11
E <sub>0</sub>	E <sub>1</sub>	$\lambda_{TK}$
4.12E-07	3.48E-10	2.52E-01